

# Parasitology Research

Founded as  
Zeitschrift für  
Parasitenkunde

Volume 78 · 1992

---

## Editors

B. Chobotar

H. Mehlhorn

## Editorial Board

M. Aikawa, Cleveland  
A. Capron, Lille  
P.A. D'Alesandro, New York  
D.D. Despommier, New York  
J. Dönges, Würzburg  
J.K. Frenkel, Kansas City  
K.T. Friedhoff, Hannover  
P. Götz, Berlin  
B. Gottstein, Zürich  
H.-G. Heidrich, Martinsried  
L. Jenni, Basel  
A.M. Johnson, Sydney  
P. Köhler, Zürich  
W. Kunz, Düsseldorf

R. Lucius, Stuttgart  
R.D. Lumsden, New Orleans  
D. McLaren, London  
E.A. Meuleman, Amsterdam  
R. Nussenzweig, New York  
L.S. Roberts, Miami  
H.J. Saz, Notre Dame  
H.M. Seitz, Bonn  
E.J.L. Soulsby, Cambridge  
C.A. Speer, Bozeman  
K.D. Spindler, Düsseldorf  
K. Vickerman, Glasgow  
W. Wülker, Freiburg



Springer International

# Parasitology Research

was founded in 1928. Volumes 1–7 named “Zeitschrift für wissenschaftliche Biologie“, Dept. F. “Zeitschrift für Parasitenkunde“ edited by A. Hase. From Volume 21 edited by G. Piekarski, from Vol. 44 (1974) edited by B.M. Honigberg and G. Piekarski; from Vol. 45 (1974) edited by B. M. Honigberg, G. Piekarski and W. Wülker; from Vol. 53 (1977) edited by J. Eckert, B.M. Honigberg, G. Piekarski and W. Wülker; from Vol. 67 (1982) edited by J. Eckert, B.M. Honigberg, H. Mehlhorn, G. Piekarski, H.M. Seitz and W. Wülker; from Vol. 68 (1982) edited by B.M. Honigberg, H. Mehlhorn, H.M. Seitz and W. Wülker; from Vol. 73 named “Parasitology Research“ edited by B.M. Honigberg, H. Mehlhorn and W. Wülker; from Vol. 77 (1991) edited by B. Chobotar, H. Mehlhorn and W. Wülker; from Vol. 78/3 (1992) edited by B. Chobotar and H. Mehlhorn.

Organ der Deutschen Gesellschaft für Parasitologie

---

Submission of a manuscript implies: that the work described has not been published before (except in the form of an abstract or as part of a published lecture, review, or thesis); that it is not under consideration for publication elsewhere; that its publication has been approved by all coauthors, if any, as well as by the responsible authorities at the institute where the work has been carried out; that, if and when the manuscript is accepted for publication, the authors agree to automatic transfer of the copyright to the publisher; and that the manuscript will not be published elsewhere in any language without the consent of the copyright holders.

All articles published in this journal are protected by copyright, which covers the exclusive rights to reproduce and distribute the article (e.g., as offprints), as well as all translation rights. No material published in this journal may be reproduced photographically or stored on microfilm, in electronic data bases, video disks, etc., without first obtaining written permission from the publisher.

The use of general descriptive names, trade names, trademarks, etc., in this publication, even if not specifically identified, does not imply that these names are not protected by the relevant laws and regulations.

While the advice and information in this journal is believed to be true and accurate at the date of its going to press, neither the authors, the editors, nor the publisher can accept any legal responsibility for any errors or omissions that may be made. The publisher makes no warranty, express or implied, with respect to the material contained herein.

*Special regulations for photocopies in the USA:* Photocopies may be made for personal or in-house use beyond the limitations stipulated under Section 107 or 108 of U.S. Copyright Law, provided a fee is paid. All fees should be paid to the Copyright Clearance Center, Inc., 21 Congress Street, Salem, MA 01970, USA, stating the ISSN 0044-3255, the volume, and the first and last page numbers of each article copied. The copyright owner's consent does not include copying for general distribution, promotion, new works, or resale. In these cases, specific written permission must first be obtained from the publisher.

Printers: Universitätsdruckerei H. Stürtz AG, Würzburg  
© by Springer-Verlag Berlin Heidelberg 1992  
Springer-Verlag GmbH & Co. KG  
D-1000 Berlin 33

# Contents

- Aalbæk B → Tjørnehøj K  
 Abdel-Hafez SK → Hijjawi NS  
 Aca IS → Tachibana H  
 Acosta I → Hernández-Rodríguez S  
 Afchain D → Duriez T  
 Agatsuma T, Ho L, Jian H, Habe S, Terasaki K, Shibahara T, Sugiyama H, Kim D, Kawashima K: Electrophoretic evidence of a hybrid origin for tetraploid *Paragonimus westermani* discovered in northeastern China 537  
 Agatsuma T, Ketudat P, Thaithong S, Shibahara T, Sugiyama H, Habe S, Terasaki K, Kawashima K: Electrophoretic analysis of a natural population of the Thai *Paragonimus heterotremus* and its genetic relationship to the three Japanese species *P. miyazakii*, *P. ohirai* and *P. westermani* 463  
 Ahmad RA → Kamis AB  
 Ahmed JS, Rintelen M, Schein E, Williams RO, Dobbelaere D: Effect of buparvaquone on the expression of interleukin 2 receptors in *Theileria annulata*-infected cells 285  
 Aluja AS de → Torres A  
 Al-Yaman FM → Hijjawi NS  
 Ambroise-Thomas P → Lecomte V  
 Amen RI, Meuleman EA: Isolation of mother and daughter sporocysts of *Trichobilharzia ocellata* from *Lymnaea stagnalis* 265  
 Amerasinghe PH, Rajapakse RPVJ, Lloyd S, Fernando ST: Antigen-induced protection against infection with *Toxocara vitulorum* larvae in mice 643  
 Anderson SML → Stitt AW  
 Aoki T → Yamasaki H  
 Arakawa A → Chitambo H  
 Araujo-Jorge TC, Lage M-JF, Rivera MT, Carlier Y, Van Leuven F: *Trypanosoma cruzi*: enhanced alpha-macroglobulin levels correlate with the resistance of BALB/cj mice to acute infection 215  
 Aslam N, Turner CMR: The relationship of variable antigen expression and population growth rates in *Trypanosoma brucei* 661  
 Assonville JA d' → Soll MD  
 Attias M, Souza W de: A freeze-fracture study of isolates of the genus *Phytomonas* 363  
 Aubert M → Gottstein B  
 Awatramani R → Fried B  
 Azevedo NL, Souza W de: A cytochemical study of the interaction between *Tritrichomonas foetus* and mouse macrophages 545  
 Babcock GF → De Stefano JA  
 Badrul-Munir MZ → Kamis AB  
 Bahhady FA → Giangaspero M  
 Baldo Corrêa E, Cunha JMT, Bunn-Moreno MM, Madeira ED: Cyclophosphamide affects the dynamics of granuloma formation in experimental visceral leishmaniasis 154  
 Bannert B: *Sarcocystis simonyi* sp. nov. (Apicomplexa: Sarcocystidae) from the endangered Hierro giant lizard *Gallotia simonyi* (Reptilia: Lacertidae) 142  
 Barbosa HS, Nazareth M de, Meirelles SL de: Ultrastructural detection in vitro of WGA-, RCA I-, and Con A-binding sites involved in the invasion of heart muscle cells by *Trypanosoma cruzi* 404  
 Bardehle G, Hintz M, Linder D, Schares G, Schott H-H, Stirn S, Zahner H: *Litosomoides carinii*: extraction of the microfilarial sheath components and antigenicity of the sheath fractions 501  
 Barral-Netto M → Pompeu M  
 Barta JR, Dubey JP: Characterization of anti-*Neospora caninum* hyperimmune rabbit serum by Western blot analysis and immunoelectron microscopy 689  
 Barthold E, Wenk P: Dose-dependent recovery of adult *Acanthocheilonemia viteae* (Nematoda: Filarioidea) after single and trickle inoculations in jirds 229  
 Bartoli P → Russell-Pinto F  
 Basurto MA → López-Revilla R  
 Beglinger R → Illgen-Wilcke B  
 Belkum A van → Meis JFGM  
 Bell-Sakyi L → Kachani M  
 Bender K, Betschart B, Hecker H: Histone-DNA interactions in the chromatin of procyclic *Trypanosoma brucei brucei* 495  
 Bender S → Dieckmann-Schuppert A  
 Bessi eres MH, Le Breton S, S egu ela JP: Analysis by immunoblotting of *Toxoplasma gondii* exo-antigens and comparison with somatic antigens 222  
 Betschart B → Bender K  
 Bienzle U → Finnemann S  
 Bilke R → Burchard GD  
 Blackburn BJ → Novak M  
 Blaschke G → Staudt U  
 Bl umcke S → Matuschka F-R  
 B ockeler W → Thomas G  
 Bonsdorff C-H von → Linder E  
 B ose R → Schelp C  
 Bouix G → Fomena A  
 Brandt JRA → Geerts S  
 Brattig NW → Burchard GD  
 Breitenbach M → T arsa E  
 Brennan GP → Maule AG  
 Bristol JR → Sambrano GR  
 Brown CGD → Kachani M  
 Brown C → Dubey JP  
 Brown WC → Sugimoto C  
 Buchanan KD → Smart D  
 Buist R → Novak M  
 Bunn-Moreno MM → Baldo Corr ea E  
 Burchard GD, Bilke R: Adherence of pathogenic and non-pathogenic *Entamoeba histolytica* strains to neutrophils 146  
 Burchard GD, M oslein C, Brattig NW: Adherence between *Entamoeba histolytica* trophozoites and undifferentiated or DMSO-induced HL-60 cells 336  
 Burge R → Golenda CF  
 B urger H-J → Fiege N  
 Cabaret J: Long-term conservation of *Muellerius capillaris* (Nematoda, Protostrongylidae) first-stage larvae: cryopreservation versus storage at -20  C 451  
 Camargo EP → Hupperich K  
 Camus D → Palluault F  
 Carlier Y → Araujo-Jorge TC  
 Cesari IM → Delgado VS  
 Cesbron L-Y → Palluault F  
 Chan PP → Teow WL  
 Chan YC → Teow WL  
 Chiappino ML → Pavesio CEN  
 Chitambo H, Arakawa A: *Trypanosoma congolense*: the in vitro akinetoplastic induction sensitivity assay 136  
 Chobotar B → Danforth HD  
 Chochillon C → Favenec L  
 Christ D, Stillson T: Effects of calcium channel blockers on the contractility of the filarii *Acanthocheilonema viteae* 489  
 Chumpitazi BFF → Lecomte V  
 Claveria FG → Saito A  
 Conrad PA → Sugimoto C  
 Conradt U, Schmidt J: A double surface membrane in plerocercoids of *Ligula intestinalis* (Cestoda: Pseudophyllidea) 123  
  orba J, Krupicer I: Efficacy of intraruminal albendazole boluses against *Dicrocoelium dendriticum* in sheep 640  
 Costa ND → Hall ML  
 Coste F → Fomena A  
 Croes H → Meis JFGM  
 Cunha JMT → Baldo Corr ea E  
 Curry WJ → Smart D  
 Danforth HD, Entzeroth R, Chobotar B: Scanning and transmission electron microscopy of host cell pathology associated with penetration by *Eimeria papillata* sporozoites 570  
 Darji N → Imbuga MO  
 Das S → Vasantha S  
 Deane MP → Thomaz N  
 Deblock S → Duriez T  
 Dei-Cas E → Palluault F  
 De Jonckheere JF, Yagita K, Endo T: Restriction-fragment-length polymorphism and variation in electrophoretic karyotype in *Naegleria fowleri* from Japan 475  
 De Jonckheere JF → Pernin P  
 Deken R de → Geerts S  
 Delgado VS, Su  rez DP, Cesari IM, Incanini RN: Experimental chemotherapy of *Schistosoma mansoni* with praziquantel and oxamniquine: differential effect of single or combined formulations of drugs

- on various strains and on both sexes of the parasite 648
- Deplazes P, Gottstein B, Eckert J, Jenkins DJ, Jimenez-Palacios S: Detection of *Echinococcus* coproantigens by enzyme-linked immunosorbent assay in dogs, dingoes and foxes 303
- Deplazes P → Gottstein B
- Depreux P → Duriez T
- Derksen ACG → Homan WL
- Desser SS, Hong H, Yang YJ: Ultrastructure of the development of a species of *Encephalitozoon* cultured from the eye of an AIDS patient 677
- De Stefano JA, Sleight RG, Babcock GF, Sramkoski RM, Walzer PD: Isolation of *Pneumocystis carinii* cysts by flow cytometry 179
- Dieckmann-Schuppert A, Bender S, Holder AA, Haldar K, Schwarz RT: Labeling and initial characterization of polar lipids in cultures of *Plasmodium falciparum* 416
- Dimmock CM → Gale KR
- Djamgoz MBA → Kawamoto F
- Dobbelaere D → Ahmed JS
- Dolan TT → Sugimoto C
- Dronen NO → McCracken RO
- Dubey JP, Peters D, Brown C: An unidentified *Toxoplasma*-like tissue cyst-forming coccidium in a cat (*Felis catus*) 39
- Dubey JP → Barta JR
- Dubremetz JF → Tomavo S
- Duriez T, Depreux P, Thuillier P, Achain D, Marcinal A, Deblock S: Potential anti-echinococcal activity of alkylaminoethers 60
- Eckerstorfer M → Tarcsa E
- Eckert J → Deplazes P
- Edberg F → Linder E
- Ehlers D, Zosel B, Mohrig W, Kauschke E, Ehlers M: Comparison of in vivo and in vitro phagocytosis in *Galleria mellonella* L. 354
- Ehlers M → Ehlers D
- Enkevort FHJ van → Homan WL
- Endo T → De Jonckheere JF
- Enriquez-Rincón F → López-Revilla R
- Enseñat C → Gomez MS
- Entzeroth R → Danforth HD
- Eom KS → Geerts S
- Eriksen L, Nansen P, Roepstorff A, Lind P, Nilsson O: Response to repeated inoculations with *Ascaris suum* eggs in pigs during the fattening period. I. Studies on worm population kinetics 241
- Eriksen L → Tjørnehøj K
- Eys GJJM van → Homan WL
- Fairweather I → Smart D
- Fairweather I → Stitt AW
- Favennec L, Chochillon C, Magne D, Meillet D, Raichvarg D, Savel J, Gobert JG: A new screening assay for anti-giardial compounds: effects of various drugs on the adherence of *Giardia duodenalis* to Caco2 cells 80
- Feliu C → Gomez MS
- Fernando ST → Amerasinghe PH
- Ferreira Chaves M → Finnemann S
- Fiege N, Klatte D, Kollmann D, Zahner H, Bürger H-J: *Eimeria bovis* in cattle: colostrum transfer of antibodies and immune response to experimental infections 32
- Finnemann S, Kremsner PG, Ferreira Chaves M, Schumacher C, Neifer S, Bienzle U: Antibody response in *Plasmodium vinckei* malaria after treatment with chloroquine and adjuvant interferon- $\gamma$  629
- Fischer P → Matuschka F-R
- Flisser A → Torres A
- Fomena A, Coste F, Bouix G: *Loma cameroonensis* sp. nov. (Protozoa: Microsporidia) a parasite of *Oreochromis niloticus* Linnaeus, 1757 (Teleost: Cichlidae) in fish-rearing ponds in Melen, Yaoundé, Cameroon 201
- Forman LA, Oaks FJA: The effect of dimethylsulfoxide on the tegumental brush border of the cestode *Hymenolepis diminuta* 66
- Freitas AL → Pompeu M
- Fried B, Awatramani R: Light and scanning electron microscopical observations of the daughter rediae of *Echinostoma trivolvis* (Trematoda) 257
- Fried B → Kruse DM
- Friedhoff KT → Kunstýř I
- Friedhoff KT → Schelp C
- Friedrich C, Kepka O, Ingolic E: On *Amblyospora styriaca* sp. nov. (Microspora, Amblyosporidae) – a microsporidian of the blackfly *Eusimulium costatum* (Diptera, Simuliidae) 635
- Fujino T → Lou YS
- Fujisaki K → Kawazu S
- Gabius H-J → Schottelius J
- Gale KR, Leatch G, Gartside M, Dimmock CM: *Anaplasma marginale*: failure of sera from immune cattle to confer protection in passive-transfer experiments 410
- Gartside M → Gale KR
- Geerts S, Zorloni A, Kumar V, Brandt JRA, Deken R de, Eom KS: Experimental infection of pigs with a *Taenia* species from Korea: parasitological and serological aspects 513
- Gérard C → Théron A
- Giangaspero M, Bahhady FA, Orita G, Gruner L: Summer-arrest development of abomasal trichostrongylids in Awassi sheep in semi-arid areas of North-West Syria 594
- Glasmeyer A → Schallig HDFH
- Gobert JG → Favennec L
- Golenda CF, Burge R, Schneider I: *Plasmodium falciparum* and *P. berghei*: detection of sporozoites and the circumsporozoite proteins in the saliva of *Anopheles stephensi* mosquitoes 563
- Gomez MS, Gracenea M, Gosalbez P, Feliu C, Enseñat C, Hidalgo R: Detection of oocysts of *Cryptosporidium* in several species of monkeys and in one prosimian species at the Barcelona Zoo 619
- Gosalbez P → Gomez MS
- Gottstein B, Deplazes P, Aubert M: *Echinococcus multilocularis*: immunological study on the “Em2-positive” laminated layer during in vitro and in vivo post-copular and larval development 291
- Gottstein B → Deplazes P
- Gracenea M → Gomez MS
- Gruner L → Giangaspero M
- Habe S → Agatsuma T
- Haglund S → Linder E
- Haldar K → Dieckmann-Schuppert A
- Hall ML, Costa ND, Thompson RCA, Lymbery AJ, Meloni BP, Wales RG: Genetic variants of *Giardia duodenalis* differ in their metabolism 712
- Halton DW → Maule AG
- Halton DW → Smart D
- Hameed N → Novak M
- Hanaichi T → Kawamoto F
- Haugland RP → Martin RJ
- Hecker H → Bender K
- Heider K → Illgen-Wilcke B
- Heiler M → Matuschka F-R
- Hernández-Rodríguez S, Acosta I, Navarrete I: *Sarcocystis jorini* sp. nov. from the fallow deer *Cervus dama* 557
- Heydorn AO → Sommer I
- Hidalgo R → Gomez MS
- Hijawi NS, Abdel-Hafez SK, Al-Yaman FM: In vitro culture of the strobilar stage of *Echinococcus granulosus* of sheep and donkey origin from Jordan 607
- Hintz M → Bardhele G
- Hintz M → Tarcsa E
- Hirose T → Saito A
- Ho L → Agatsuma T
- Holder AA → Dieckmann-Schuppert A
- Homan WL, Derksen ACG, Knapen F van: Identification of diagnostic antigens from *Trichinella spiralis* 112
- Homan WL, Enkevort FHJ van, Limper L, Eys GJJM van, Schoone GJ, Kasprzak W, Majewska AC, Knapen F van: Comparison of *Giardia* isolates from different laboratories by isoenzyme analysis and recombinant DNA probes 316
- Hong H → Desser SS
- Horn K → Sommer I
- Hosier DW → Kruse DM
- Howells RE → Warbrick EV
- Hupperich K, Camargo EP, Milder R: Ultrastructural study of the host-parasite relationship of trypanosomatids in the housefly 48
- Igarashi I → Saito A
- Ihara S → Tachibana H
- Ikeda H → Watanabe J
- Ikeda T: Tegumental glycocalyx antigens of *Paragonimus ohirai* recognized by monoclonal antibody: comparative analysis of molecular weight and reactivity to peanut agglutinin at various developmental stages 625
- Illgen-Wilcke B, Beglinger R, Pfister R, Heider K: Studies on the developmental cycle of *Trichospirura leptostoma* (Nematoda: Thelaziidae). Experimental infection of the intermediate hosts *Blattella germanica* and *Supella longipalpa* and the definitive host *Callithrix jacchus* and development in the intermediate hosts 509

- Imbuga MO, Osir EO, Labongo VL: Inhibitory effect of *Trypanosoma brucei brucei* on *Glossina morsitans* midgut trypsin in vitro 273
- Imbuga MO, Osir EO, Labongo VL, Darji N, Otieno LH: Studies on tsetse midgut factors that induce differentiation of bloodstream *Trypanosoma brucei brucei* in vitro 10
- Inceni RN → Delgado VS
- Ingolic E → Friedrich C
- Ishii Y → Lou YS
- Ito S → Shimizu S
- Jenkins DJ → Deplazes P
- Jennings FW → Ndung'u JM
- Jian H → Agatsuma T
- Jimenez-Palacios S → Deplazes P
- Johnston CF → Maule AG
- Johnston CF → Smart D
- Johnston CF → Stitt AW
- Jones MK, Whittington ID: Nuclear bodies in the egg cells of a *Gyrodactylus* species (Platyhelminthes, Monogenea) 534
- Jong-Brink M de → Schallig HDFH
- Jorgensen WK, Waldron SJ, Mc Grath J, Roman RJ, Vos AJ de, Williams KE: Growth of *Babesia bigemina* parasites in suspension cultures for vaccine production 423
- Kachani M, Spooner RL, Rae P, Bell-Sakya L, Brown CGD: Stage-specific responses following infection with *Theileria annulata* as evaluated using ELISA 43
- Kamio T → Kawazu S
- Kamis AB, Ahmad RA, Badrul-Munir MZ: Worm burden and leukocyte response in *Angiostrongylus malaysiensis* - infected rats: the influence of testosterone 388
- Kasprzak W → Homan WL
- Kauschke E → Ehlers D
- Kawamoto F, Kido N, Hanaichi T, Djamgoz MBA, Sinden RE: Gamete development in *Plasmodium berghei* regulated by ionic exchange mechanisms 277
- Kawashima K → Agatsuma T
- Kawazu S, Sugimoto C, Kamio T, Fujisaki K: Antigenic differences between Japanese *Theileria sergenti* and other benign *Theileria* species of cattle from Australia (*T. buffeli*) and Britain (*T. orientalis*) 130
- Kepka O → Friedrich C
- Ketudat P → Agatsuma T
- Kido N → Kawamoto F
- Koie M: Scanning electron microscopy of cercariae, metacercariae and adults of *Pygidiopsis ardeae* Koie, 1990 (Digenea, Heterophyidae) 469
- Kim D → Agatsuma T
- Klatte D → Fiege N
- Knapen F van → Homan WL
- Kobayashi S → Tachibana H
- Kollmann D → Fiege N
- Kominami E → Yamasaki H
- Kremsner PG → Finnemann S
- Krupicer I → Čorba J
- Kruse DM, Hosier DW, Fried B: The expulsion of *Echinostoma trivolvis* (Trematoda) from ICR mice: scanning electron microscopy of the worms 74
- Kumar V → Geerts S
- Kunstýř I, Schoeneberg U, Friedhoff KT: Host specificity of *Giardia muris* isolates from mouse and golden hamster 621
- Kusel JR → Martin RJ
- Kwa BH → Rao UR
- Labongo VL → Imbuga MO
- Lage M-JF → Araujo-Jorge TC
- Lanners HN: Prolonged in vitro cultivation of *Plasmodium vivax* using Trager's continuous-flow method 699
- Lanners HN → Wiser MF
- Latka I → Taraschewski H
- Leach G → Gale KR
- Le Breton S → Bessières MH
- Lecomte V, Chumpitazi BFF, Pasquier B, Ambroise-Thomas P, Santoro F: Brain-tissue cysts in rats infected with the RH strain of *Toxoplasma gondii* 267
- Lee H-H, Terada M: In vitro effects of milbemycin oxime: mechanism of action against *Angiostrongylus cantonensis* and *Dirofilaria immitis* 349
- Limper L → Homan WL
- Lind P → Eriksen L
- Linder D → Bardehle G
- Linder E, Thors C, Edberg F, Haglund S, Bonsdorff C-H von: Generation of antibodies against *Toxoplasma gondii* antigen associated with dense granules and the parasitophorous vacuole of the host cell 175
- Lipkowitz KB → McCracken RO
- Lloyd S → Amerasinghe PH
- López-Revilla R, Reyes JL, Enríquez-Rincón F, Basurto MA: Immediate deterioration of rabbit colon preparations by *Entamoeba histolytica* trophozoite lysates 260
- Lou YS, Fujino T, Morita K, Ishii Y: A comparative ultrastructural and histochemical study of the metacercarial cyst walls of four species of *Paragonimus* (Troglorematidae: Trematoda) 457
- Lymbery AJ → Hall ML
- Madeira ED → Baldo Corrêa E
- Magne D → Favenne C
- Maier WA → Margos G
- Maier WA → Schenker W
- Maizels RM → Rathaur S
- Majewska AC → Homan WL
- Marcincal A → Duriez T
- Margos G, Maier WA, Seitz HM: The effect of norematosis on the development of *Plasmodium falciparum* in *Anopheles stephensi* 168
- Martin RJ, Kusel JR, Robertson SJ, Minta A, Haugland RP: Distribution of a fluorescent ivermectin probe, bodipy ivermectin, in tissues of the nematode parasite *Ascaris suum* 341
- Martínage A → Tomavo S
- Matuschka F-R, Fischer P, Heiler M, Blümcke S, Spielman A: Stage-associated risk of transmission of the Lyme disease spirochete by European *Ixodes* ticks 695
- Maule AG, Brennan GP, Halton DW, Shaw C, Johnston CF, Moore S: Neuropeptide F-immunoreactivity in the monogenean parasite *Diclidophora merlangi* 655
- Mayberry LF → Sambrano GR
- McCracken RO, Lipkowitz KB, Dronen NO: Efficacy of albendazole and mebendazole against *Hymenolepis microstoma* and *Hymenolepis diminuta* 108
- Mc Grath J → Jorgensen WK
- Mehlhorn H → Schmahl G
- Mehlhorn H → Sommer I
- Mehlhorn H → Staudt U
- Meillet D → Favenne C
- Meirles SL de → Barbosa HS
- Meis JFGM, Croes H, Mons B, Belkum A van, Ponnudurai T: Localization of circumsporozoite protein in the sporogonic stages of *Plasmodium vivax* 165
- Meloni BP → Hall ML
- Meuleman EA → Amen RI
- Milder R → Hupperich K
- Minami T → Shimizu S
- Minta A → Martin RJ
- Miyahara K → Saito A
- Mohrig W → Ehlers D
- Moné H → Théron A
- Mons B → Meis JFGM
- Moore S → Maule AG
- Morita K → Lou YS
- Möslein C → Burchard GD
- Müller S → Rathaur S
- Murray M → Ndung'u JM
- Mutharia LM → Sugimoto C
- Nakata K → Watanabe J
- Nansen P → Eriksen L
- Nansen P → Tjørnhøj K
- Nashimoto H → Watanabe J
- Navarrete I → Hernández-Rodríguez S
- Navarro R → Torres A
- Nayar JK → Rao UR
- Nazareth M de → Barbosa HS
- Ndarathi CM: Cellular responses to culture-derived soluble exoantigens of *Trypanosoma lewisi* 324
- Ndarathi CM: Trypanocidal drugs and their effect on parasitaemia, specific IgG production and protective immunity in rats infected with *Trypanosoma lewisi* 247
- Ndung'u JM, Wright NG, Jennings FW, Murray M: Changes in atrial natriuretic factor and plasma renin activity in dogs infected with *Trypanosoma brucei* 553
- Neifer S → Finnemann S
- Ng GC → Teow WL
- Nichols BA → Pavesio CEN
- Nilsson O → Eriksen L
- Novak M, Hameed N, Buist R, Blackburn BJ: Metabolites of alveolar *Echinococcus* as determined by [<sup>31</sup>P]- and [<sup>1</sup>H]-nuclear magnetic resonance spectroscopy 665
- Oaks FJA → Forman LA
- Ono K → Saito A
- Orita G → Giangaspero M
- Osir EO → Imbuga MO
- Otieno LH → Imbuga MO

- Palluault F, Slomianny C, Soulez B, Deicas E, Camus D: High osmotic pressure enables fine ultrastructural and cytochemical studies on *Pneumocystis carinii*. I. Epon embedding 437
- Palluault F, Soulez B, Slomianny C, Deicas E, Cesbron L-Y, Camus D: High osmotic pressure for *Pneumocystis carinii* London Resin White embedding enables fine immunocytochemistry studies: I. Golgi complex and cell-wall synthesis 482
- Pasquier B → Lecomte V
- Pavesio CEN, Chiappino ML, Setzer PY, Nichols BA: *Toxoplasma gondii*: differentiation and death of bradyzoites 1
- Paz KC → Tachibana H
- Pearson TW → Sugimoto C
- Pernin P, De Jonckheere JF: Appearance in Europe of *Naegleria fowleri* displaying the Australian type of restriction-fragment-length polymorphism 479
- Peters D → Dubey JP
- Peters W → Taraschewski H
- Pfister R → Illgen-Wilcke B
- Plancarte A → Torres A
- Pompeu M, Freitas AL, Reis GA dos, Baral-Netto M: T-lymphocytes in experimental *Leishmania amazonensis* infection: comparison between immunized and naive BALB/c mice 16
- Ponnudurai T → Meis JFGM
- Preveraud-Sindou M, Rondelaud D: *Fasciola hepatica*: Early lesions in the viscera of seven pulmonate species after penetration of the miracidium 360
- Rae P → Kachani M
- Raether W → Schmahl G
- Raichvarg D → Favennec L
- Rajapakse RPVJ → Amerasinghe PH
- Rao UR, Vickery AC, Kwa BH, Nayar JK, Subrahmanyam D: Effect of carrageenan on the resistance of congenitally athymic nude and normal BALB/c mice to infective large of *Brugia malayi* 235
- Rathaur S, Müller S, Maizels RM, Walter RD: Identification of circulating parasite acetylcholinesterase in human and rodent filariasis 671
- Ravi Kumar BV → Vasantha S
- Rees HH → Warbrick EV
- Reis GA dos → Pompeu M
- Reyes JL → López-Revilla R
- Rintelen M → Ahmed JS
- Ritter G → Schmahl G
- Rivera MT → Araujo-Jorge TC
- Robertson SJ → Martin RJ
- Roepstorff A → Eriksen L
- Rohde K, Watson NA: Ultrastructure of the developing protonephridial system of the cercaria of *Philophthalmus* sp. (Trematoda, Digenea) 368
- Rohde K → Watson NA
- Roman RJ → Jorgensen WK
- Rondelaud D → Preveraud-Sindou M
- Rondelaud D → Ruellan L
- Roopashree SD → Vasantha S
- Ruellan L, Rondelaud D: Lamellar structure of the amoebocyte-producing tissue in *Lymnaea truncatula* infected with *Fasciola hepatica* 270
- Rüger W → Sommer I
- Ruider S → Schmahl G
- Russell-Pinto F, Bartoli P: Sympatric distribution of *Meiogymnophallus minutus* and *M. fossarum* (Digenea: Gymnophallidae) in *Cerastoderma edule* in the Ria de Aveiro estuary in Portugal 617
- Saito A, Igarashi I, Miyahara K, Venturini YC, Claveria FG, Hirose T, Suzuki N, Ono K: Effects of reactive oxygen intermediate scavengers in the antitoxoplasmic activity of activated macrophages 28
- Sambrano GR, Mayberry LF, Bristol JR: Effect of *Eimeria nieschulzi* on *Nippostrongylus brasiliensis*-induced IgE 172
- Santoro F → Lecomte V
- Savel J → Favennec L
- Schallig HDFH, Glasmeier A, Jong-Brink M de: Vertebrate-type steroids in cercaria of the schistosome *Trichobilharzia ocellata* 709
- Schares G → Bardehle G
- Schein E → Ahmed JS
- Schelp C, Böse R, Friedhoff KT: Demonstration of extrachromosomal DNA from *Babesia equi* merozoites 707
- Schenker W, Maier WA, Seitz HM: The effects of *Nosema algerae* on the development of *Plasmodium yoelii nigeriensis* in *Anopheles stephensi* 56
- Schmahl G, Raether W, Mehlhorn H: Hoe 092 V, a new triazine derivative effective against a broad spectrum of fish and crustacean parasites 702
- Schmahl G, Ruider S, Mehlhorn H, Schmidt H, Ritter G: Treatment of fish parasites. 9. Effects of a medicated food containing malachite green on *Ichthyophthirius multifiliis* Fouquet, 1876 (Hymenostomatida, Ciliophora) in ornamental fish 183
- Schmahl G → Staudt U
- Schmidt H → Schmahl G
- Schmidt J → Conradt U
- Schneider I → Golenda CF
- Schnieder T: Use of a recombinant *Dictyocaulus viviparus* antigen in an enzyme-linked immunosorbent assay for immunodiagnosis of bovine dictyocaulosis 298
- Schoeneberg U → Kunstýř I
- Schoone GJ → Homan WL
- Schott H-H → Bardehle G
- Schott H-H → Tarcsa E
- Schottelius J: Neoglycoproteins as tools for the detection of carbohydrate-specific receptors on the cell surface of *Leishmania* 309
- Schottelius J, Gabius H-J: Detection and quantitation of cell-surface sugar receptor(s) of *Leishmania donovani* by application of neoglycoenzymes 529
- Schumacher C → Finnemann S
- Schwarz RT → Dieckmann-Schuppert A
- Séguéla JP → Bessiéres MH
- Seitz HM → Margos G
- Seitz HM → Schenker W
- Setzer PY → Pavesio CEN
- Shankar SK → Vasantha S
- Shaw C → Maule AG
- Shaw C → Smart D
- Shibahara T → Agatsuma T
- Shimizu S, Shumura K, Ito S, Minami T: *Babesia ovata*: isolation from erythrocytes and development of an enzyme-linked immunosorbent assay for detection of antibodies 684
- Shumura K → Shimizu S
- Sinden RE → Kawamoto F
- Sinden RE → Winger LA
- Singh M → Teow WL
- Sleight RG → De Stefano JA
- Slomianny C → Palluault F
- Smart D, Johnston CF, Curry WJ, Shaw C, Halton DW, Fairweather I, Buchanan KD: Immunoreactivity to two specific regions of chromogranin A in the nervous system of *Ascaris suum*: an immunocytochemical study 329
- Smith CJZ → Soll MD
- Soares MJ → Thomaz N
- Soll MD, Assonville JA d', Smith CJZ: Efficacy of topically applied ivermectin against sarcoptic mange (*Sarcoptes scabiei* var. *bovis*) of cattle 120
- Sommer I, Horn K, Heydorn AO, Mehlhorn H, Rüger W: A comparison of sporozoite and cyst merozoite surface proteins of *Sarcocystis* 398
- Soulez B → Palluault F
- Souza W de → Attias M
- Souza W de → Azevedo NL
- Souza W de → Thomaz N
- Spielman A → Matuschka F-R
- Spindler-Barth M: Endocrine strategies for the control of ectoparasites and insect pests 89
- Spooner RL → Kachani M
- Sramkoski RM → De Stefano JA
- Staudt U, Schmahl G, Blaschke G, Mehlhorn H: Light and scanning electron microscopy studies on the effects of the enantiomers of praziquantel and its main metabolite on *Schistosoma mansoni* in vitro 392
- Stillson T → Christ D
- Stirm S → Bardehle G
- Stirm S → Tarcsa E
- Stitt AW, Fairweather I, Trudgett AG, Johnston CF: *Fasciola hepatica*: localization and partial characterization of tubulin 103
- Stitt AW, Fairweather I, Trudgett AG, Johnston CF, Anderson SML: Localization of actin in the liver fluke, *Fasciola hepatica* 96
- Stockert JC: A simple and selective method for visualizing the kinetoplast of trypanosomes by means of phosphomolybdic acid and a photographic developer 263
- Suárez DP → Delgado VS
- Subrahmanyam D → Rao UR
- Sugimoto C, Mutharia LM, Brown WC, Pearson TW, Dolan TT, Conrad PA: Analysis of *Theileria parva* immunodominant schizont surface antigen by two-dimensional polyacrylamide gel electrophoresis and immunoblotting 82
- Sugimoto C → Kawazu S

- Sugiyama H → Agatsuma T  
Suzuki N → Saito A
- Tachibana H, Kobayashi S, Paz KC, Aca IS, Tateno S, Ihara S: Analysis of pathogenicity by restriction-endonuclease digestion of amplified genomic DNA of *Entamoeba histolytica* isolated in Pernambuco, Brazil 433
- Taraschewski H, Peters W: Comparative investigations of the morphology and chemical composition of the eggshells of Acanthocephala. II. Palaeacanthocephala 376
- Taraschewski H, Peters W, Latka I: Comparative investigations of the morphology and chemical composition of the eggshells of Acanthocephala. III. Eoacanthocephala 382
- Tarcsa E, Eckerstorfer M, Breitenbach M, Hintz M, Schott H-H, Zahner H, Stirm S:  $\epsilon$ -( $\gamma$ -Glutamyl)lysine cross-links in *Litomoides carinii* microfilarial sheaths 623
- Tateno S → Tachibana H
- Teow WL, Ng GC, Chan PP, Chan YC, Yap EH, Zaman V, Singh M: A survey of *Blastocystis* in reptiles 453
- Terada M → Lee H-H
- Terasaki K → Agatsuma T
- Thaithong S → Agatsuma T
- Théron A, Gérard C, Moné H: Early enhanced growth of the digestive gland of *Biomphalaria glabrata* infected with *Schistosoma mansoni*: side effect of parasite manipulation? 445
- Thomas G, Böckeler W: Light and electron microscopical investigations of the mid-gut epithelium of different Cephalobaenida (Pentastomida) during digestion 587
- Thomaz N, Soares MJ, Souza W de, Deane MP: Ultrastructural aspects of *Trypanosoma (Megatrypanum) freitasi* in co-cultivation with mammalian cells 209
- Thompson RCA → Hall ML
- Thors C → Linder E
- Thuillier P → Duriez T
- Tjørnehøj K, Eriksen L, Aalbæk B, Nansen P: Interaction between *Ascaris suum* and *Pasteurella multocida* in the lungs of mice 525
- Tomavo S, Martinage A, Dubremetz JF: Phosphorylation of *Toxoplasma gondii* major surface antigens 541
- Torres A, Plancarte A, Villalobos ANM, Aluja AS de, Navarro R, Flisser A: Praziquantel treatment of porcine brain and muscle *Taenia solium* cysticercosis. 3. effect of 1-day treatment 161
- Trudgett AG → Stitt AW
- Turner CMR → Aslam N
- Van Leuven F → Araujo-Jorge TC
- Vasanth S, Ravi Kumar BV, Roopashree SD, Das S, Shankar SK: Neuroanatomy of *Cysticercus cellulosae* (Cestoda) as revealed by acetylcholinesterase and non-specific esterase histochemistry 581
- Venturini YC → Saito A
- Vickery AC → Rao UR
- Villalobos ANM → Torres A
- Vos AJ de → Jorgensen WK
- Waldron SJ → Jorgensen WK
- Wales RG → Hall ML
- Walter RD → Rathaur S
- Walzer PD → De Stefano JA
- Warbrick EV, Rees HH, Howells RE: Immunocytochemical localisation of an FMRamide-like peptide in the filarial nematodes *Dirofilaria immitis* and *Brugia pahangi* 252
- Watanabe J, Nakata K, Nashimoto H, Ikeda H: Cloning and characterization of a repetitive sequence from *Pneumocystis carinii* 23
- Watson NA, Rohde K: Ultrastructure of sperm and spermatogenesis of *Rugogaster hydrolagi*, Schell 1973 (Platyhelminthes, Trematoda, Aspidogastrea, Rugogastriidae) 516
- Watson NA → Rohde K
- Wenk P → Barthold E
- Whittington ID → Jones MK
- Williams KE → Jorgensen WK
- Williams RO → Ahmed JS
- Winger LA, Sinden RE: Immunoprotection in mice susceptible to waning memory against the pre-erythrocytic stages of malaria after validated immunisation with irradiated sporozoites of *Plasmodium berghei* 427
- Wiser MF, Lanners HN: Rapid transport of the acidic phosphoproteins of *Plasmodium berghei* and *P. chabaudi* from the intraerythrocytic parasite to the host membrane using a miniaturized fractionation procedure 193
- Wright NG → Ndung'u JM
- Yagita K → De Jonckheere JF
- Yamasaki H, Kominami E, Aoki T: Immunocytochemical localization of a cysteine protease in adult worms of the liver fluke *Fasciola* sp. 574
- Yang YJ → Dessler SS
- Yap EH → Teow WL
- Zahner H → Bardehle G
- Zahner H → Fiege N
- Zahner H → Tarcsa E
- Zaman V → Teow WL
- Žďárská Z: Transmission electron microscopy of sensory receptors of *Echinostoma revolutum* (Froehlich 1802) cercaria (Digenaea: Echinostomatidae) 598
- Zielke E: On the infectivity of early third-stage *Brugia* larvae isolated from the abdomen of *Aedes aegypti* 78
- Zorloni A → Geerts S
- Zosel B → Ehlers D

Indexed in *Current Contents*  
*Abstracted in Helminthological Abstracts*  
*Series A and Protozoological Abstracts*

